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ABSTRACT

This document contains a design for creating an educational data bank of pupil personnel information. The specific information that should be collected and maintained in such an updatable data bank is described in detail. The document provides instructions on interpretation of this data for (1) predicting approximate percentages of students who would not complete high school (both individual and group studies); (2) predicting the approximate number of students who would not complete formal studies at the time of graduation; (3) aiding proper authorities by predicting which students in high school would not continue past 12th grade (individual predictions); (4) establishing types of occupational directions that past groups of dropouts and terminal students have followed and attempting to direct them into, and prepare them for, useful types of occupations; and (5) aiding school counselors in guiding the right students into district-provided educational programs. The document also suggests ways to provide a fail-safe system to protect the privacy of the information in the data files. (DE)

A SUGGESTED PUPIL REQUIREMENTS FILE

Educational Data Processing Planning Study #1

38-A 8

Conducted for and jointly with:

The Educational Development Cooperative
18216 Harwood Avenue
Homewood, Illinois

Board of Vocational and Technical Education
Research Coordinating Unit
State of Illinois

Bremen Community High School District
District 228

Conducted by

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Gentlemen:

The attached study, A Suggested Pupil Requirements File, in accordance with our contractual agreement, is hereby submitted. Criteria for compilation of this study include, as specified:

- to predict to appropriate authorities approximate percentages of students who would not complete high school (individual and group studies)
- to predict approximate number of students who would not complete formal studies at the time of graduation
- to aid proper authorities by predicting which students in high school would not continue past 12th grade (individual predictions)
- to establish types of occupational directions past groups of dropouts and terminal students have followed; and to attempt to direct them into, and prepare them for, useful types of occupations
- to aid school counselors in guiding the right students into district-provided educational programs.

Benjamin C. Willis Educational Services, Inc., provides this study to the Educational Development Cooperative as part of their joint commitment with the Bremen Township District 228 to the funding agency, the Department of Vocational and Technical Education, State of Illinois. Federal monies appropriated for this study, in the amount of $48,430 were allocated for this purpose.

Sincerely,

Stanley R. Patton
Associate
Benjamin C. Willis Educational
Services, Inc.

N-X

ED0 37806

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A
SUGGESTED
PUPIL REQUIREMENTS FILE

TO

EDUCATIONAL DEVELOPMENT COOPERATIVE
HOMEWOOD, ILLINOIS

Submitted by
Stanley R. Patton, Associate
Benjamin C. Willis Educational Services, Incorporated

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I. RATIONALE

PLANNING AND DEVELOPING AN EDUCATIONAL DATA BANK: A PUPIL REQUIREMENTS FILE

The common assumption concerning educational data processing has created an image in the minds of many people of a battery of machines being fed information and producing complicated work sheets with numbers and signs which resemble a mathematical "mumbo jumbo" understandable to but a handful of technological witch doctors. It must be remembered that what most people know about computers comes from secondary sources: newspapers, cartoons, magazine articles, and television presentations. While many are attracted to this little known vehicle, the computer, they simultaneously are filled with considerable fear, anxiety, and an unhealthy sense of awe that suggests they feel they are dealing with a kind of formidable electronic super-brain as often depicted in science-fiction.

Others are absorbed by the supposed "glamour" that surrounds data-processing equipment. These individuals are awed by the gadgetry; they envision Utopia. They expect answers to problems by simply pushing buttons on electronic computers. The truth is that a computer essentially is an electronic device which has been developed to perform faster and more accurately than man can; but it can do nothing without man designing programs which tell the computer what to do and, therefore, man controls the operations. It takes more than a computer to process educational data. It depends upon people in the educational profession who are sensitive to the possibilities and limitations of the computer and prepared to use a promising vehicle to improve education and its administration.

This consultation is directed toward the creation of an educational data bank specifically composed of pupil personnel information. Essentially, concern lies with the development of a comprehensive computerized information system which, when designed and implemented, will affect in some manner the operation of participating school systems, the educational planning for/of the students, the logistical arrangement of resources, the fiscal planning and cost projections, and the professional involvement of teachers in the ongoing educational decision-making process.

The concept of developing an integrated educational information system is in recognition of the need for timely, accurate information for educational decision-making. Moreover, it is recognized that the establishment of a pupil personnel educational data bank or pupil requirements file to give information to assist in decision-making would be a powerful tool for the strengthening of the participating school systems.

Such an educational data bank, when created and operational, would produce a useful system as the following suggests:

(1) It would provide basic information to assist participating school district personnel in the functions of regulatory, operational, planning, and developmental activities.

(2) It would enable the participating users to make educational decisions based on adequate usable, accessible information as needed.

(3) It would provide for simplified methods of collecting, storing, and reporting usable information.

(4) It would eliminate the problems associated with collecting educational data which often are dispersed or processed through numerous school agencies.

(5) It would furnish comprehensive data to responsible school authorities quickly, accurately, and economically.

There are certain concerns with any type of centralized data-collecting agency that must be recognized and clearly understood. While there are many advantages to be listed for a pupil requirements educational data bank, it is urged that there must be careful study of means to provide a fail-safe system to protect the information in the data files. Any rationale for the creation of a pupil personnel data center must set forth clearly certain points to be observed in the development and implementation of such a program. The following points should be recognized:

(1) An educational data bank must have relevance to those who are legitimate users of it.

(2) All potential users of the educational data bank must be schooled continually or appraised of its function, availability, and usage.

(3) A regional data center must be aware of the needs of all parts of the sub-system in order to maintain necessary flexibility so that the total system may revise and adapt to identified needs.

(4) Mechanisms must be found to insure accuracy and currency of entries into the pupil requirements data file.

(5) An educational data bank must function in a manner that does not violate the individual student's right of privacy. The question of ethics is a paramount professional consideration.

(6) In the administration of a regional data bank, special care must be taken to bar unauthorized persons from securing information. The question of administrative discretion with regard to informational use and release must be resolved.

(7) A data center should be large enough to obtain operational efficiency, yet small enough to retain a reasonable degree of personalization for its participating member school districts.

(8) An educational data bank must guard against becoming monopolistic in the pupil personnel data-gathering activities of school systems. A data center must not replace sub-unit data-gathering activities. Personnel in each school system must not develop the attitude of being swallowed up by the central agency.

(9) A regional data center for services to educational systems should collect and store data that can be retrieved for use in the areas of:

   (a) pupil personnel services
   (b) curriculum development
   (c) administrative planning
   (d) research and project development

(10) Above all, a data center must be geared to feasibility and sound management. It must be designed to accommodate political, economic, and administrative realities in order to be workable.

An educational data bank can provide data to be used systematically to examine the functions performed by school systems and offer comparisons of alternative courses of action to be taken. It is a feature of a systems analysis approach to relate ends to means so that decision-makers have a clear picture of the choices to reach projected objectives. A data bank enables its users to design a total and systematic review of related operations that contribute to a unifying pattern of logical and efficient operating procedures.

The full power of an educational data bank with emphasis on pupil personnel data, as it can be applied to normal school functions, needs to be tested. The time is propitious for the challenged school leaders to implement the data center concept to assure quality and economy in American education.

II. REVIEW OF LITERATURE

The concern of this section of the study is to review briefly the relevant literature concerning school leaving, mainly in the area of school dropouts. This review appears to be related directly to the problem of developing a systematic student data system and regional data bank, since potential dropouts and/or terminal students constitute 50 percent of the high school population served by the Educational Development Cooperative (EDC). Vocational education, as such, will not be reviewed since this area has been researched thoroughly and reported in a number of recent publications.[1]

In his recent article "Much Ado About Dropouts," Ristow calls attention to "...the deluge of reports, articles, and editorials dealing with dropouts."[2] While EDC schools report a dropout rate which averages only approximately 5 percent, as compared to the present national rate of from 30 to 40 percent, both the seriousness and the complexity of the EDC dropout problem are of sufficient to merit considerable interest and study. In a recent doctoral dissertation involving a large high school within the EDC area, Renfrow makes the following observation concerning the dropout problem:

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[1] See for example the following: National Society for the Study of Education, Vocational Education, Sixty-fourth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1965), and the Educational Development Cooperative, Vocational Education: A Feasibility Study for the Suburbs of Tomorrow (Homewood, Illinois: Educational Development Cooperative, 1968).

[2] Lester W. Ristow, "Much Ado About Dropouts," Phi Delta Kappan, 46 (May, 1965), p. 461.

> "As public interest increases, care needs to be taken to avoid certain dangers. These arise, in general, from the temptation to oversimplify the nature of the problem and its solutions. Although much is known about dropouts, they still cannot be type-cast. They can be characterized, grouped, and sub-grouped, but not sterotyped. School leaving has too seldom been regarded as a symptom of varied personal and social conditions; too often each observer has studied the problem as the blind wise men did the elephant, each from his own vantage point or with the limitation of his own orientation. Too often neatly packaged solutions have been sought and have been offered. Pitfalls are many; genuine solutions are demanding."[3]

Renfrow goes on to assert that:

> "In recent years, attention appears to have been shifted from the relatively simple considerations of the background, school abilities, and school experiences of potential dropouts and dropouts. Increasingly, it has been focused on attitudes, values, and the psychological adjustment of potential dropouts. . . . Useful new instruments have been developed for the study of student attitudes toward school, their value orientation, and teacher perceptions of student adjustment and personality characteristics important in attaining suitable psychological, social, and scholastic adjustment. These have made data readily accessible and quantifiable for interpretation and school use. Research findings have suggested relationships useful to the study of potential dropouts and dropouts. They have provided a base for study, interpretation, and application."[4]

In their study of intellectually capable students who drop out of high school, Lichter, Rapien, Seibert, and Sklansky discuss school leaving in this way:

> Numerous educational studies have made it evident that school dropout is a complex problem to which there is no simple solution. But from these studies a highly significant inference can be drawn: Rarely do children who are successful in school leave prior to graduation. The high school dropout is usually a child who has

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[3] Omer W. Renfrow, "Dropout Prone and Non-Dropout Prone High School Boys: A Study of Differences" (unpublished doctoral dissertation, University of Illinois, 1968), p. 3.

[4] Renfrow, op. cit., pp. 4-5.

> failed in his general school adjustment. This failure is not necessarily a matter of a specific learning disability but rather a broader "educational" disability.[5]

Bowman and Matthews reviewed the dropout literature available as of 1960. They reported on studies concerned with (1) the characteristics of dropouts, (2) their reasons for leaving school, and (3) the problems of adjustment they face later.[6] They list common findings drawn from numerous important studies; according to the literature, dropouts

(1) were more often boys than girls.
(2) were from the lower class.
(3) belonged to minority groups.
(4) came from broken homes.
(5) had parents with little education.
(6) had below average intellectual potential as measured by IQ tests.
(7) were usually retarded in reading and other skill areas.
(8) were usually over-age, having been retained in one or more grades.
(9) usually failed several courses in the year prior to leaving school.
(10) had frequently moved from school to school.

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[5] Solomon O. Lichter, Elsie B. Rapien, Frances M. Seibert, and Morris A. Sklansky, The Dropouts (Glencoe, Illinois: The Free Press, 1962) p. 2.

[6] Paul H. Bowman and Charles V. Matthews, Motivations of Youth for Leaving School, Cooperative Research Project No. 200, U. S. Office of Education (Quincy, Illinois: University of Chicago, Quincy Youth Development Project, 1960, p. 3.

(11) showed a marked regression in attendance in junior and senior high school.

(12) usually had enough money to continue, but lack of money indirectly had an influence.

(13) often had difficulty getting and keeping a job.

(14) came from families in which parents less strongly supported the schools and their children's interest in education.

(15) placed little value on education as a help and had little further interest even though life adjustment was not easy.

(16) felt that their education should have been more practical and prepared them for a vocation.

(17) felt insecure and lacked a feeling of belonging in school.

(18) felt poorly treated by their teachers and were fearful of asking for help.

(19) were often dissatisfied with their social relationships in school and lacked friends.[7]

In a recent addition to the literature concerned with the characteristics of dropouts, their conduct, families, and friends, Cervantes reports that dropouts had:

(1) behavior problems requiring discipline.

(2) parents who were inconsistent in affection and discipline.

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[7] Bowman and Matthews, op. cit., pp. 7-8.

(3) unhappiness in their family situation (common acceptance, communication, and pleasurable experiences lacking; family solidarity minimal).

(4) a weak or absent father figure.

(5) few family friends.

(6) friends who were not approved by parents.

(7) friends who were not school-oriented.

(8) friends who were much older or much younger.[8]

Finally, a publication of the U. S. Office of Education provides some fairly reliable clues to follow in identifying the potential dropout:

> Primary factors: Consistent failure to achieve in regular school work. Age sixteen years or older (35 percent dropout at age 16, 27 percent at age 17). Low reading ability. Grade level placement two or more years below average for age. Retained in grade at least once in the elementary school. Irregular attendance and frequent tardiness. Frequent changes of schools. Refusal to participate in extracurricular activities. Performance consistently below potential. Parents usually have less than an 8th grade education, are in low-income groups--usually in a trade or labor occupation. Boys are more likely than girls to become dropouts.
>
> Related factors: Active antagonism to teachers and principals. Marked disinterest in school and a feeling of "not belonging." Not accepted by the school staff. Unhappy family situation. Marked differences from schoolmates, such as in interests, social level, physique, national origin, dress, or personality development. Inability to afford the normal expenditures of schoolmates.

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[8] Lucius F. Cervantes, The Dropout: Causes and Cures (Ann Arbor: University of Michigan Press, 1965), pp. 198-199.

> Inability to compete with brothers and sisters. Serious physical or emotional handicaps. Discipline cases. Record of delinquency. Activities centered outside school. Male car owners. Often in difficulty with community agencies and the law. An air of purposelessness and no personal goals for achievement. Negative attitude of parents toward graduation.[9]

The more relevant recent work done in the field concerned with school leaving was reported. Emphasis was placed primarily upon the dropout and secondarily upon the terminal student. Vocational education was not reviewed in view of the study in depth done for the Educational Development Cooperative by the Social, Educational Research and Development, Inc., in September, 1968, and in view of the fact that the area has been researched thoroughly and reported in readily available publications.

The purpose of this brief review, then, has been to call attention to some of the primary student characteristics and/or factors most frequently reported to be associated with school leaving. Each of these needs to be considered in developing a systematic student data system.

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[9] U.S. Department of Health, Education, and Welfare, The 1963 Dropout Campaign (Washington, D.C.: Office of Education, 1964), p. 12.

III. REVIEW OF DEMOGRAPHIC DATA ITEMS

In order to gain an accurate perspective of the school districts and students encompassed by the Educational Development Cooperative, the S. E. R. D. report, Vocational Education: A Feasibility Study for the Suburbs of Tomorrow[1] was reviewed extensively and in depth. An assumption was made that demographic types of data must be secured that would complement the types of data presented in the forementioned report. With this concept as a premise, the Pupil Requirements File was examined.

In the original pupil requirements file, as developed by the three subcommittees of teachers, administrators, and counselors, there were twenty-six items devoted to personal identification and family and residence information. This number was reduced to twenty-four with certain deletions, modifications, and rearrangement of individual items being accomplished. (Refer to pages 35 to 43.)

With regard, for example, to item two, "Race," it was decided to await the legal opinion in process regarding the collectability and to reduce the number of options to three, with one option being suitable for the possible racial minorities uncommon in the area encompassed by the Educational Development Cooperative. A change was made in that item three, "Universal Birth Certificate Number," was recommended to replace an assigned Social

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[1] Social, Educational Research and Development, Inc. Vocational Education: A Feasibility Study for the Suburbs of Tomorrow. Homewood: The Educational Development Cooperative, 1968.

Security or generated serial number at time of entry into the school system. Further discussion of this item is found in Section IV of this report. Because of this change, it was considered unnecessary to retain in the proposed data file the item in the original file dealing with evidence and vertification of birth. In item six, "Place of Birth," it was considered redundant to devise a numeric code in addition to the postal zip code and the alpha-numeric characters allotted for employment of this item. No changes were made in items dealing with marital status or religion. English was added to item 9, dealing with the language spoken in the home. No modifications were made in items dealing with head of household other than item fifteen, pertaining to educational level of male head of household. This item was condensed as it was believed the discreteness of the options would not increase the predictability of the item. Similar changes were made with items dealing with the female head of the household.

Temporary residence and geographic area code items were deleted as being unnecessary and non-productive items for the purpose for which the data file was intended. Item twenty-four is a new entry to the file, pertaining to other members of the household. Clusters of ages per response were deemed more appropriate than specific age responses for the purpose of the file.

In summary, it was considered that the basic demographic items as revised and presented in the recommended Pupil Requirements File would secure, either alone or in concert with other items, the types of information necessary to establish and continue a basic demographic information system of normative data regarding the pupils enrolled in the participating schools of the Educational Development Cooperative. The twenty-four basic demographic data items will be discussed from a different perspective in the following section of this report.

IV. PUPIL REQUIREMENTS FILE INTERPRETATION

It has been proposed in the foregoing sections of this report that to become operationally effective, an educational data bank must include sufficient quantity and quality of information regarding each pupil served by the system to permit orderly examination of functions to be performed by each school district and, subsequently, to offer comparisons of alternative courses of action to be taken. Further, it has been noted that provisions should be made in the data system for such concerns as: effective collecting and updating of data elements included in the file; efficient information storage; ease, speed, and accuracy of data retrieval; and protection of an individual's right of privacy regarding use of the data pertaining to him.

Based on the foregoing criteria, the document that follows, entitled, The Pupil Requirements File, was developed. The file consists of three major divisions or types of pupil information: (1) Personal Identification Information, (2) Family and Residence Information, and (3) Individual or Group Assessment. The file includes sixty-five individual data elements, each of which was judged by the consultant team to be relevant for the administrative uses for which the information file has been conceived. The data elements are numbered on the left hand or first column of the document.

In the second through the sixth columns, each data element is described along with coding information used for recording information to be included in the file regarding the specific element. The last two columns in the document provide information concerning the amount of space in the file that will be needed for storage of the data associated with the element. The column entitled "Character" refers to the number of alphabetic and/or numeric character spaces needed for each individual (pupil) record, indicated by the letter "A" or "N" which refers to alphabetic and numeric respectively.

The column entitled "Volume" lists the number of pupil records and the total volume of characters for the element. For example, data element number two is described as "Race," with coding information of 1-"Caucasian," 2-"Negro" or 3-"Other." A pupil who belongs to the Negro race would be coded as a "2." To denote such in the data file would require one numeric space. Since there are about 200,000 total pupils in the Educational Development Cooperative, the total volume would be 200,000 character records. In data element number one, "Name of The Pupil," 30 alphabetic character spaces were allowed for each pupil, therefore a volume of 6,000,000 character spaces was required (200,000 pupils x 30 character spaces for each pupil). It is to be noted that for some elements the pupils were divided into elementary and high school classification. In these cases, allowances were made in the record for 50,000 high school pupil records and 150,000 elementary school pupil records. In the case of a few data elements, it was assumed that the data would pertain to only a part of the total number of pupils.

In regard to the column headed "Accessibility," it is recommended that to protect confidentiality of certain types of pupil information, that each data element be labeled as to the restrictions, if any, in terms of who could receive individual or aggregated data. To shorten the length of the documents, a coding system was used to identify restricted groups of users. These codes are:

0-No restriction on accessibility to the element or data

1-Data accessible to building administration only

2-Data accessible to central office administration only

3-Data restricted to counseling personnel only.

The column in the document labeled "Source" deals with where original and update entry information is likely to be obtained. Eight discrete sources were identified along with two overlapping categories. The sources were coded as follows:

1-Student

2-Head of Household

3-Teacher

4-Counselor

5-Building Administrator

6-Central Office

7-Nurse

8-Educational Development Cooperative

9-Other

0-All

It should be noted that some data elements may be derived primarily from one source, others from multiple sources, while several kinds of data may be received at one time or another from all of the listed sources.

"Frequency of Input" as a column title refers to when the data for a given element might be placed in the file or updated. Coding for the perceived categories on frequency of input are listed below. Multiple codes also may appear in this column thus denoting that more than one condition may prevail for the data element.

1-Pupil entry
2-Daily
3-Grading period
4-Semester
5-Annual
6-Special

During the process of developing the Pupil Requirements File, a concern was evident among the consultants regarding priorities for inclusion of data elements in the system should not all data be collected appropriately upon initial establishment of the educational data bank. Priorities of high, medium, or low were assigned to each data element in the column headed by the inscription "Priority of Inclusion." The alphabetic codes H, M, and L were used respectively to denote high, medium, and low priority. That is, those data elements coded "H" under this column heading constituted, in the opinion of the consultants, the highest priority or those that should be gathered first. Medium priority items coded "M" could be added to the file at a later date and the inclusion of low, coded "L" data elements logically could be the last for consideration.

The following sections of the report explain some of the more pertinent characteristics of the major divisions or types of pupil information in the Pupil Requirements File.

Part A: Personal Identification Information

This section of the Pupil Requirements File contains a total of nine items of information which relate to the personal characteristics of each student. All items except one have an accessibility code of zero, meaning that the information would be available to all professional personnel in the school system and the Educational Development Cooperative. The single item not classified as non-restrictive is information dealing with the identification of the student's religion. This particular item has an accessibility rating of one, signifying that this information will be made available to administrators only, but not to classroom teachers or others who have general accessibility to data in the File.

All items in this section except one have a high priority of inclusion rating. The item associated with religion identification has only a medium priority of inclusion rating.

The items in this section have a frequency of input level of either a one, or a one combined with a six. Five items out of nine have a frequency of input rating of one, meaning that the information generally is collected when the student enrolls in school for the first time in his school life. Five items are rated with a combination of a one and a six, signifying the information can be collected when the student enrolls in school as well as at special times during the school year.

The source of information ratings signify that most of the information will be collected from the following people: student himself, head of household, and the school nurse. In several instances, other school personnel may logically be expected to furnish information for this section.

Attention is directed to item three wherein it is suggested that the universal birth certificate number be employed rather than a generated number or Social Security number for use in theE. D. C. data bank. The reasoning behind this recommendation is that increasing ease of attainment and accessibility of this type of number for identification purposes substantiates its usage.

Part B: Family and Residence Information

All fourteen items in this section have accessibility ratings of zero. This indicator means that the information is available to all professional personnel in the school system and the Educational Development Cooperative. All items in this section, except one, have a high priority of inclusion rating. The item associated with the identification of "Mother's Maiden Name" is suggested to have a low priority of inclusion rating. The source of information ratings show that many types of school personnel can supply the necessary information called for in this section. This is illustrated by all items having a code of zero.

Six out of fourteen items in this section have a frequency of input rating of one, five, and six combination. Six items have a frequency of input rating of one, four, six combination. The remaining two items respectively are rated with a one and the other with a level two combination. Thus, the primary source of input for the majority of the items in this section is pupil entry into the respective sub-unit of the member school districts participating in the Educational Development Cooperative, with auxiliary input occurring annually or at given instances for special reasons.

It should be noted that items 15 and 20, pertaining to educational attainment of male and female heads of household and item 24, "Other Members of Household," are groupings of categories rather than discrete categories. The reasoning is based on the estimated predictability value of the categories.

Part C: Individual or Group Assessment Information

Perhaps the heart of the Pupil Requirements File is contained in Section C, which is titled "Individual or Group Assessment Information." In Section C are contained 41 items beginning with number 25 and extending through item number 65. This section of the report will contain a description of the salient features of these items.

The first group of items relates to physical health conditions and characteristics of the pupil. These include vision, hearing, speech and other physical impairments. Information on physical examinations and limitations or restrictions of school activities also is included. While it is recognized that an individual's physical health is of great importance, this brace of items in the Pupil Requirements File overall is accorded only a moderate level for priority of inclusion. Data relating to these items usually would be provided by the individual student, his parents or the school nurse and normally would be collected on the date of entry of the student. However, an annual up-date process is needed and in some cases, particularly relating to limitations of school activities, special entries should be made whenever they are deemed significant. Access to the information in these items necessarily should not be restricted.

In the file two items which have a very high priority of inclusion are numbered 32 and 33. In the former, the pupil is classified according to one of three conditions. The first of the classifications indicates (1) if the student is receiving special instruction outside the normal classroom, (2) if special instruction is being given within the normal classroom setting, and (3) if special instruction is needed but not available.

Teachers, counselors, and building administrators typically are the source of this information as well as being primarily those professional personnel who should have open access to any such information about the pupil. Input information on item 32 should be processed into the file at the time of entry, on an annual basis, and at special times throughout the year.

Item 33, which was described above as having a very high priority of inclusion, relates information regarding pupils who need special types of diagnostic programs conducted by professionally qualified personnel. It is important to note the many sub-classifications in this item. Conceivably, a pupil could be catalogued into a multiple number of categories by the specialist making the diagnosis. It is suggested this information should be highly confidential with the school counselor being the only privileged person to access. Entry of data should be made any time professional opinions are rendered about the student.

Quite obviously, when a project to develop a design of a data system is of the scope undertaken by the Educational Development Cooperative, certain compromises must be made. One of these results from the large number of pupils involved in the project when assessments of abilities, aptitudes, interests and attitudes of all pupils in the project area are attempted. The more preferred method of assessment would be on an individual pupil basis by specially qualified examiners. However, in lieu of this, many paper-and-pencil tests must be utilized. Thus, the Pupil Requirements File includes three key items - numbers 34, 35, and 36 - devoted to this type of pupil assessment.

In item 34 the usual types of standardized tests and inventories are included in the file. Space is provided for administrative, descriptive and normalized data of such tests and inventories to be indicated. Skilled counselors and other professionals in the schools will be able to utilize the item data in an effective manner as they work with pupils. Since it does take training to interpret these tests, accessibility of this high priority item is limited to personnel normally privileged to information at the building level or in some cases for counselors only, depending upon the specific test.

From all of the paper-and-pencil tests or inventories considered, the consulting team for the project has singled out two specific inventories to be given special emphasis. Each of the inventories was deemed important enough to have single items devoted to them. The first of these is the School Interest

Inventory developed by William C. Cottle.

The School Interest Inventory is a new, 150-item scale which identifies potential dropouts and likely terminal students so that they can be given counseling one or two years before they reach the legal age for leaving school. In development of the instrument inventory, it was given to 25,000 students in grade nine, with a follow-up study of school rosters two years later. School records indicated that of the original sample, 800 were known to be dropouts. The validity of the scale thus has been established by comparing the inventory performances of known dropouts with stay-ins. The inventory effectively differentiates between stay-ins and dropouts and is highly reliable even among seventh-grade students. Used in conjunction with other information such as academic records and teachers' evaluations, the scale provides an excellent guide for determining each student's need for more effective placement either in the school system or in work experiences outside the school coordinated with vocational education.

Three important measured areas achieved by the School Interest Inventory are the family attitude toward school, the attitude of the pupil toward school in general, and the overall teacher-student attitudinal relationship. For the above reasons, item 35 is exceptionally important but should be restricted to access by counselors only. It is suggested that this inventory be administered to pupils when they are in the seventh grade and again when they are in grade nine. Local or system specific norms would have to be generated with local factor analysis applied to select the above three measured area components.

The second significant inventory which was singled out by the consulting team is identified as the Ohio Vocational Interest Survey. OVIS, as it commonly is called, is a recent interest inventory designed to assist pupils in grades eight through twelve with their educational and vocational plans. The consulting team has designated initial administration of OVIS in grade eight, and a second administration in grade ten. With its Data-People-Things approach to occupational counseling, OVIS is ideally suited for group and individual exploration of the world of work and gives rise to the two suggested administrations.

Basically, OVIS combines an information questionnaire with an interest inventory. The results of the questionnaire provide the pupil and the counselor with valuable background data for interpreting the interest scores. The interest inventory profiles a student's interest along 24 scales. These are indicated in item 36 of the Pupil Requirements File. The 24 scales represent the entire spectrum of occupations as defined in the 1965 edition of the Dictionary of Occupational Titles. Thus, the interest scores can be interpreted in terms of actual jobs that a pupil might wish to investigate and toward which a pupil might wish to plan his vocational education experiences. Finally, it is suggested that information gleaned from the OVIS be restricted to counselors and building level personnel normally permitted to utilize confidential information.

School attendance status of the pupils may be secured from information derived from items 37 through 46. Of the ten items, six have a high priority of inclusion while four are classified as being of moderate priority. None of the information in the items should be restricted in use except information from item 46 which relates to reasons for withdrawal from the school. Counselors constitute the type of school personnel who should control the release of information from this latter item.

Important attendance knowledge contained in this series of items include whether the pupil was a former dropout, the percent of time enrolled in school, and the attendance patterns established by the pupil. These foregoing factors are considered of great consequence when considering dropout or termination proneness of pupils. Employment of the data contained in these items also permits the statistical attendance reports to be computed by mechanical means for attendance units of participating member school districts of the Educational Development Cooperative.

Achievement within the formal classroom, performance in school activities, and general behavioral tendencies in the school environment must be considered as valuable inputs for a viable data file on pupils. The Pupil Requirements File has a series of eleven items which yield this essential information. The series begins with item 47 and extends through item 57 with all of these items accorded a high priority of inclusion to meet the purposes for which the file is intended.

Supporting the adage "Nothing succeeds like success," students who tend to have relatively good grade point averages, compiled from the marks they receive from class performance, ordinarily do not become school dropouts, though they may become terminal students. Items 47 through 53 yield information relative to the degree of success patterns for students in the courses they pursue. Such variables as class rank, amount of credit attained, cumulative grade point average, and promotion patterns are indicated in these items.

It is suggested that entries on course performance be made in the data file at the end of each semester. Teachers, counselors, and building administrators should provide this information at such times to keep the file current. Sharp changes in course performance could then be noted and examined as being symptomatic of pupil disenchantment with school. It is postulated that disenchantment frequently is a forerunner of poor school attendance and subsequent dropout and/or terminal students.

Further indications of disengagement tendencies of a student may be inferred from the content of items 56 and 57. In the latter, disciplinary referrals within the school should be examined for frequency and, if warranted, nature of the referrals. Patterns determined here may be utilized by counselors to uncover another possible indication of impending school-leaving before graduation. It also may be determined from item 56 whether a pupil is interested highly and/or active in extra-class activities which are sponsored by the school. As reported in the literature, pupils engaging in activities more often are satisfied with the total school experience than are those pupils who tend not to identify with any extra-class activity. Participation in such activities generates a greater degree of "staying power" as the pupil moves through the grade levels of the school. Information relative to co-curricular activities need not be restricted; but only the school counselors and administrators ought to have access to disciplinary referral information.

Another item in the data file is very closely related to item 56 on co-curricular activities. This item, number 58, relates to the out-of-school activities in which the student engages. Such activities sponsored by community groups, religious groups, or special interest groups would be noted here since they, too, have possible value in predicting dropout and terminal student tendencies.

An interesting combination of data element information is available in items 59 and 60. The value of these items is reflective in nature. For it is in item 59 that pupils' reported educational and vocational interests and plans are indicated. The next item, number 60, provides information on the pupil after high school graduation or withdrawal; first, the type of continuing and/or vocational education which the pupil pursued subsequent to leaving school is indicated, and secondly, the nature of the employment secured by the pupil is shown. Schools could use such retrospective data to indicate and/or reinforce counselor efforts in follow-up studies of former pupils. There appears to be little need to restrict the accessibility of this information to any one group or professional people. The data should be collected annually, if possible, and on special occasions if feasible.

Data relative to administrative, fiscal, and transportation concerns should be recorded in the series of items 61 through 64. Fiscal support at various levels for some pupils is available in governmental programs depending upon a variety of eligibility factors associated with program purposes. Beginning with items 61 and 62, information on transportation, tuition, and special assistance for which the pupil is eligible may be secured. Such things as distance to be transported and at whose expense, for example, local, state, individual, is included here. In addition, the tuition status of the student is determined. An annual input of this information from the central administrative school offices should be made and no restrictions on the release of the information are necessary. Inclusion of these data has utility for facilitating collection and submission of reports pertinent to these topics for the participating schools of the Educational Development Cooperative as well as for predictive purposes. Probably the most difficult of these data to secure for the Pupil Requirements File is that to be collected for items 63 and 64. In the first of these two items, information necessary to establish eligibility of the local school system to receive federal assistance is desired. Some fifty federal programs are listed in this item; space is available and additions should be made as new legislative enactments regarding assistance become available. The second item, number 64, establishes information as to whether a pupil is receiving a portion of his support via some welfare program. Programs at local, county, state and federal levels of government are included as well as those emanating from private individual or institutional sources. Confinement of information contained in these two items should be to the central and building administrative school offices. At any time this type of information is secured, it should be relayed to the centralized Educational Development Cooperative file.

Educators, including classroom teachers and administrators, as well as sociologists, and psychologists have contributed much to the voluminous collection of data concerning school dropouts and terminal students in the past several years. However, school counselors and most teachers have some particularly special qualities, based upon a background of professional training and professional experience which enable them to make effective professional judgments regarding potential dropouts and terminal students. The last item, number 65, in the Pupil Requirements File provides access to data relative to such professional judgments. The item is simplified by listing three parcels of information. The first of these is the source of information; that is, whether it is the professional opinion of an elementary teacher, a secondary teacher, a school counselor, or an administrator. The secured professional opinion suggests whether the pupil will drop out prior to attaining high school status, during the high school career, terminate formal education at grade twelve, or extend formal education beyond grade twelve. The year the professional opinion was rendered forms the third and final aspect of the item. Only school counselors should have access to the professional opinions in item 65. It is suggested these professional opinions should be made on the probable educational attainment of the pupil at least on an annual basis and provision allowed for input at special times during the year.

The selection of the sixty-five data elements considered most relevant to the purposes intended for the data file and included in this initial Pupil Requirements File document does not preclude the probability that as the file is utilized, updated, evaluated, and revised by the Educational Development Cooperative, data elements not included may appear needed for more precise application. Likewise, it is suggested that certain of the data elements included may be judged of limited value and accordingly excluded. It is anticipated that experience with the data file will yield valuable ideas for necessary internal changes to make it more fully sensitive to purposes for which it is intended and employed.

V. PUPIL REQUIREMENTS FILE

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	A. Personal Identification Information		1-0	1-6			
1	Last name, first name, middle initial and appendages	0	0	1.6	H	30A	200,000 6,000,000
2	Race 1-Caucasian 2-Negro 3-Other	(Legal Opinion in Process)	0	1	H	IN	200,000
3	ID Number Universal birth certificate number*	0	1,2,7	1.6	H	11N	200,000 2,200,000
4	Sex M-Male F-Female	0	0	1	H	1A	200,000
5	Birthdate Month, day, year	0	1,2	1	H	6N	200,000 1,200,000

*Or other number specified by school system: 1st three digits identify school district.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
6	Place of Birth City, County and State and/or Zip codes	0	1,2	1	H	18A/N	200,000 3,600,000
7	Marital Status 1-Single 2-Married, living with spouse 3-Married, separated 4-Divorced 5-Widowed	0	0	1,6	H	1N	200,000
8	Religion 1-Catholic 2-Jewish 3-Protestant 4-Other - No restrictions on Education Other - Restricted participation associated with school activities 5-Educational program 6-Holiday 7-Health 8-Patriotic 9-Undeclared	1	1,2	1,6	M	1N	200,000
9	Language Primary Language spoken in the home. 00-English 01-Chinese 02-French 03-German 04-Greek 05-Hebrew	0	1,2	1,6	H	2N	200,000 400,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	06-Italian 07-Japanese 08-Norwegian 09-Polish 10-Russian 11-Spanish 12-Dutch 13-Other						
		B. Family and Residence Information					
10	Name of Primary Head of Household (May be either male or female) Last, First, Initial	0	9	1, 5, 6	H	20 A	200,000 4,000,000
11	Sex of Primary Head of Household M-Male F-Female	0	9	1, 5, 6	H	1A	200,000
12	Is Primary Head of Household Legal Guardian 1-Yes 2-No	0	9	1, 5, 6	H	1A	200,000
13	If item 12 is NO, provide name and address of legal guardian.	0	9	1, 5, 6	H	60A	50,000 3,000,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
14	Relationship of Male Head of Household to Pupil 1-Father 2-Other legal guardian 3-Stepfather 4-Spouse 5-Other relative 6-Foster parent 7-Self 8-Other	0	9	1, 5, 6	H	2N	200,000 400,000
15	Educational Level of Male Head of Household 0-No formal education 1-Elementary K-6 2-Jr. high 7-8 3-Less than sr. high 4-Senior high graduate 5-Associate Arts Degree 6-Bachelor's Degree 7-Master's Degree 8-Doctor's Degree 9-No information available	0	9	1, 5, 6,	H	1N	200,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
16	Primary Occupation of Male Head of Household	0	9	1, 4, 6	H	3N	200,000 600,000

Enter one number
from each column

a. Occupational Types

1-Professional, technical or managerial
2-Clerical and sales
3-Service
4-Farming, fishing, forestry and related occupations
5-Processing
6-Machine trades
7-Bench work
8-Structural work
9-Miscellaneous
0-No information available

b. Status

1-Full-time
2-Part-time
3-Unemployed
4-Disabled
5-Retired
6-No information available

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	c. Employed 1-Self-employed 2-By private organization 3-Local 4-State 5-Federal (Subject to P. L. 874 and P. L. 815) 6-Federal (Other) 7-Other						
17	Secondary Occupation of Male Head of Household if applicable (coded as number 16 above)	0	9	1, 4, 6	H	3N	100,000 300,000
18	Mother's Maiden Name Last, First, Initial (ignore female parent definition)	0	9	1	L	20A	200,000 4,000,000
19	Relationship of Female Head of Household to Pupil 1-Mother 2-Other legal guardian 3-Stepmother 4-Spouse 5-Other relative 6-Foster parent 7-Self 8-Other	0	9	1, 4, 6	H	2N	200,000 400,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
20	Educational Level of Female Head of Household 0-No formal education 1-Elementary K-6 2-Jr. high 7-8 3-Less than sr. high 4-Sr. High graduate 5-Associate Arts Degree 6-Bachelor's Degree 7-Master's Degree 8-Doctor's Degree 9-No information available	0	9	1, 4, 6	H	1N	200, 000
21	Primary Occupation of Female Head of Household Enter one number from each column a. Occupational types of 1-Professional, technical or managerial 2-Clerical and Sales 3-Service 4-Farming, fishing, forestry and related occupations 5-Processing 6-Machine trades 7-Bench work 8-Structural work 9-Homemaker 0-Miscellaneous	0	9	1, 4, 6	H	3N	200, 000 600, 000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	b. Status 1-Full-time 2-Part-time 3-Unemployed 4-Disabled 5-Retired 6-No information available						
	c. Employed 1-Self-employed 2-By private organization 3-Local 4-State 5-Federal (Subject to P. L. 874 and P. L. 815) 6-Federal (Other) 7-Other						
22	Secondary Occupation of Female Head of Household (coded as Number 20 above)	0	9	1, 4, 6	H	3N	50,000 150,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
23	Residence of Pupil 5-Street number-integers only or P.O. Box No., etc. 4-St. No. fraction, location, such as 1/2, 1/4, REAR BOX, etc. 20-Street name, or Post Office location of Box, etc. 4-Type of Street-St., Ave., Blvd., Road, Lane, Crt. Pl., etc. 5-Compass Area-North, East, South, West, N. E., N. W., etc. 4-Apartment, Floor, Lot No., etc. 5-Zip Code Permanent Address 1-Yes 2-No	0	9	1, 2	H	48A/N	200, 000 9, 600, 000
24	Other Members of the Household (excluding heads of household and student) 1-1 yr. of age 2-2 yr. of age 3-3 yr. of age 4-4 yr. of age 5-5 yr. of age 6-6-17 yrs. of age 7-18-24 yrs. of age 8-25 and over	0	9	1, 5, 6	H	8N	200, 000 1, 600, 000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	C. Individual or Group Assessment Information						
25	Vision Vision Handicap 1-Yes 2-No Handicap Corrected 1-Yes 2-No Year of Last Examination (last two digits)	0	1, 2, 7	1, 5, 6	M	4N	$\frac{200,000}{800,000}$
26	Hearing Hearing Handicap 1-Yes 2-No Handicap Corrected 1-Yes 2-No Year of Last Examination (last two digits)	0	1, 2, 7	1, 5, 6	M	4N	$\frac{200,000}{800,000}$
27	Speech Speech Handicap 1-Yes 2-No Handicap Corrected 1-Yes 2-No Type of Correction 1-Medical 2-Emotional 3-Therapy Year of Last Examination (last two digits)	0	1, 2, 7	1, 5, 6	H	5N	$\frac{200,000}{1,000,000}$

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
28	Physical Impairment	0	1, 2, 7	1, 6	M	7	200, 000
	Physical Handicap						1, 400, 000
	1-Yes						
	2-No						
	Impairment Identification						
	1-Asthma						
	2-Epilepsy						
	3-Cerebral Palsy						
	4-Diabetes						
	5-Allergy						
	6-Heart Condition						
	7-Crippled						
	8-Physical Development						
	9-Hernia						
	0-None						
	10-Miltiple (refer to health record)						
	11-Other						
	Extent of Impairment						
	1-Slight						
	2-Moderate						
	3-Severe						
	Handicap Corrected						
	1-Yes						
	2-No						
	Year of Last Examination (last two digits)						

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
29	Immunization Records Nature of Disease 1-Measles year of test (last two digits) year of immunization (last two digits) 2-Polio year of test (last two digits) year of immunization (last two digits) 3-Tetanus 4-Diphtheria 5-Whooping cough 6-Mumps 7-T. B. 8-Smallpox 9-Other None None-Religious	0	1, 2, 7	1, 5, 6	L	50N	200,000 10,000,000
30	Physical Examination School 1-School physical examination required every 4 years 1-Yes 2-No Last two digits of year of the last school examination Other 1-Non-School connected physical examination required 1-Yes 2-No Last two digits of year in which this type of physical examination was taken	0	1, 5, 7	1, 5. 6	M	6N	200,000 1,200,000
31	Health Limitation for School Activities Restrictions 1-No physical education 2-No shop classes 3-No laboratory classes 4-No climbing stairs 5-Seat at front of the room 6-Other 7-None	0	7	1, 4, 6	H	5N	200,000 1,000,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	Duration 1-One year 2-Indefinite 3-Permanent 4-Other						
	Persons Making Recommendations (Include year--last two digits) 1-Physician 2-Nurse 3-Dentist 4-Other health official 5-Mental health worker 6-Psychologist 7-School counselor/social worker 8-School administrator 9-Other						
32	Type of Special Instruction A. Special B. Special instruction but not in a special class C. Special instruction needed but not available	1	3, 4, 5	1, 5, 6	H	1A	70,000
33	Professional Referrals 1-Referral made to professionally-qualified personnel 1-Yes 2-No 2-Date of Referral Month/Day/Year 3-Date of Testing 4-Date of Recommendation 5-Date of Placement 6-Professional Classification of Pupil Type	3	4, 7	6	H	35N	70,000 2,450,000

Item Description

00-Normal range of pupils - Pupils within the normal range of ability and performance; that is, the general type of pupils in most of the schools, courses, or classes serving pupils of a given age group.

01-Gifted and talented - Pupils identified by professionally qualified personnel as being gifted or talented in areas such as the following:

- 11-In general academic work-Including mathematics, science, social studies, reading, foreign languages, and other language arts.
- 12-In fine arts areas-Including music, dance, arts of design and dramatics.
- 13-In vocational and technical areas.
- 19-In other areas-Including athletics, human relationships, and creativity in areas not identified above.

20-Slow Learner-Pupils who display evidence of having difficulty in adjusting to the curriculum in academic areas, requiring some minor modification of school offering within the regular classroom in order to attain maximum growth and development.

30-Mentally handicapped- Pupils identified by professionally qualified personnel as being mentally handicapped, according to degrees of retardation. This includes those individuals whose level of mental development is such that they have been identified by professionally qualified personnel as unable to profit from the school program without special help. Pupils in this category are classified educationally as: educable (mild), mentally handicapped; trainable (moderate), mentally handicapped; and custodial (severe or profound), mentally handicapped.

- 31-Educationally (mild) mentally handicapped-Mentally handicapped individuals who are educable in the academic, social, and occupational areas even though moderate supervision may be necessary.
- 32-Trainable (moderate) mentally handicapped-Mentally handicapped individuals for whom little or no self support is anticipated although some improvement in performance is possible, especially in the self care, social, and emotional adjustment and economic usefulness in the home or a sheltered environment.
- 33-Custodial (severe or profound) mentally handicapped-Mentally handicapped individuals for whom neither self support nor significant improvement in performance is anticipated.

40-Physically handicapped-Pupils identified by professionally qualified persons as having one or more physical handicaps, e.g., the blind, the hard of hearing, the speech impaired, and the crippled.

41-Blind-Those pupils who are declared legally blind.

42-Partially seeing-Those pupils who require special educational facilities beyond the normal program.

43-Deaf-Those pupils who are declared legally deaf.

44-Hard of hearing-Those pupils who require special consideration because of a hearing loss.

45-Speech handicap- Those pupils whose speech is abnormal due to a physical reason.

46-Crippled- Individuals having a physical impairment of a type which might restrict normal opportunities for education or self support. This term is generally considered to include individuals having impairments caused by a congenital abnormalcy (e.g., cleft palate, club foot, absence of some member, etc.); impairment caused by disease (e.g., poliomyelitis, tuberculosis, encephalitis, and other neurological involvements which might result in conditions such as cerebal palsy or epilepsy, etc.); and impairments caused by accidents (e.g., fractures or burns which cause contractures, etc.).

47-Pupils with special physical health problems-Pupils identified by professionally qualified personnel as having either permanently or periodically less than the usual amount of strength, energy, and endurance, and hence may need appropriate modification of their educational program. Such a condition might result from chronic illness or environmental causes, e.g., diabetes, cardiac disease, epilepsy, or lead poisoning.

48-Physically handicapped in home, hospital or other institution-

50-Socially and/or emotionally handicapped-Pupils identified by professionally qualified personnel as having a social and/or emotional handicap, e.g., emotionally disturbed and delinquency prone. (Pupils having a cultural handicap are included under a separate classification.)

51-Emotionally disturbed-Pupils identified by professionally qualified personnel as having an emotional handicap of such a nature and severity as to require one or more special services, whether or not such services are available. Such services include institutional care, other professional treatment or care, and instruction in special classes for special pupils on a full-time or part-time basis.

52-Delinquency prone- Pupils who have been identified by professionally qualified personnel as having a strong tendency toward commiting acts which are classified as patters of delinquent behavior.

59-Other social and/or emotional handicaps-Pupils identified by professionally qualified personnel as being socially and/or emotionally handicapped in a manner other than those identified under the items above. The nature of their handicap should be specified, e.g., children addicted to hallucinogenic or other deviate drugs.

60-Culturally handicapped-Pupils identified by professionally qualified personnel as having a deviation or deficiency in cultural or environmental background that adversely affects their school performance or learning, e.g., non-English speaking, migrant children, functional illiteracy, and members of disadvantaged cultural groups.

61-Cultural disadvantage-Pupils whose cultural background is so different from that of most pupils that they have been identified by professionally qualified personnel as needing additional educational opportunities beyond what is provided by the usual school program if they are to be educated to a level of their abilities. Certain types of programs for culturally disadvantaged pupils are referred to as "compensatory educational programs."

62-Non-English speaking-Pupils whose ability to speak English is so retarded that they are unable to profit from the usual classroom instruction in English.

63-Functional illiteracy-Individuals who are unable to read, write, and compute sufficiently well to meet the needs of adult life. This frequently is considered to include adults who have not gone beyond the eighth grade or who cannot read, write, and compute at or about an eighth grade level of performance.

69-Other cultural handicaps- Pupils identified by professionally qualified personnel as having cultural handicaps in a manner other than those identified under the items above, e.g., culturally different, parental neglect, and economically disadvantaged. The nature of their handicap should be specified.

70-Pupils with learning difficulties-

71-Learning difficulties-Pupils identified by professionally qualified personnel as having sharp deficits in one or a limited number of aspects of the cognitive processes (i.e., the sensory, associate, or expressive processes) and marked underachievement when considering the general level or mode of the overall abilities. Many such pupils are also said to have "brain injury" (Strauss Syndrome), "perceptual handicaps," or "minimal brain dysfunctions." For reporting purposes pupils having learning difficulties should be identified also according to other characteristics (as being within the normal range of pupils, as being gifted or talented, as being slow learners, as being mentally handicapped, partially seeing, hard of hearing, or speech impaired, or having other specific types of handicaps). In each case, the distinctive features are: (1) The sharp inbalance within the pupil's cognitive development, and (2) A marked underachievement.

72-Communication disorder-Pupils identified as having a communication problem for which no physical reason can be determined.

73-Underachieving Pupils- Pupils who score consistently and significantly below their expected performance levels on standardized achievement tests. Their expected performance levels are determined by using scores on standardized tests of ability to predict performance on standardized tests of achievement.

80-Former dropouts- Pupils who have returned to school after dropping out; that is, pupils whose most recent formal education was in an elementary or secondary school and who withdrew from this school by dropping out.

90-Miscellaneous characteristics-

- 91-Multiple handicaps-Pupils having more than one handicap. These pupils should be identified also according to the nature of each handicap as indicated elsewhere in this series.
- 92-Pre-kindergarten age-Pupil is below legal age for admission into kindergarten.
- 93-Employed youth under age 18-Persons under 18 years of age who have not completed a secondary school and who left full-time instruction to enter the labor force.
- 94-Pregnancy-A pupil who is receiving a special program because of pregnancy.
- 95-Adult and post high school-Persons of adult age (usually 18 years old) and youth beyond the age of compulsory school attendance who enroll in a program of instruction.
- 96-Parents-Parents of school children and children of pre-school age.
- 99-Other characteristics- Distinctive characteristics of pupil groups not identified elsewhere under this series, e.g., pupils in a given program of study. Any such characteristic should be specified.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
34	Standardized Tests and Inventories (Test Identification and Date Administered, month/day/year) *as dictated by local school policy.	1 and/or 3*	3, 4, 5. 7, 9	4, 6	H	H. S. 1000 A/N Elem. 1400 A/N	50, 000 50, 000, 000 150, 000 210, 000, 000
	Achievement Batteries 101-American College Test (Example)						
	Scholastic Aptitude (Intelligence) 201-ACE Psychological (Example)						
	Single Subject Achievements 301-Barrett-Ryan English Test (Example)						
	Multifactor Aptitude Battery 401-Differential Aptitude Test Battery A. A. T. (Example)						
	Personality 501-California Test of Personality (Example)						
	Interest Inventory 601-Kuder Preference (Example)						
	Non-Standardized Measures 701-Frostig Development Test of Visual Perception (Example)						

Publisher
1-American College Testing Program, Inc.
2-American Guidance Services, Inc.
3-American Orthopsychiatry Association
4-Association Press
5-Bobbs-Merrill Co., Inc.
6-California Test Bureau
7-Columbia University
8-Consulting Psychologist Press, Inc.
9-Educational Testing Service
10-Educators and Employers Tests and Services Associates
11-Ginn and Company
12-Harcourt, Brace and World
13-Houghton-Mifflin
14-Lyons and Carnahan
15-Minneapolis Educational Test Bureau
16-Personnel Press, Inc.
17-Psychological Corp.
18-Public School Publishing Company
19-Science Research Associates, Inc.
20-Scott-Foresman
21-The Steck Company
22-U.S. Employment Security Commission
23-State Devised Test
24-Locally Devised Test
99-Other

Copyright date
Year

Norm Group (First digit)
1-National
2-Regional
3-State

4-County
5-District
6-School
7-Coop
8-Others

Norm Group (Second digit)
1-Sex
2-Age
3-
4-
5-
6-
7-
8-
9-

Test Conversion/Score
1-Percentile band
2-Percentile
3-Stanine
4-Standard score
5-Grade equivalent
6-Age equivalent
7-I. Q.
8-Mental age
9-Other

Test Form
1-A
2-B
3-C
4-1a
5-2a
6-Other

Grade Level at Time of Test

00-No formal education
01-Nursery or pre-kindergarten
02-Kindergarten
03-First grade
04-Second grade
05-Third grade
06-Fourth grade
07-Fifth grade
08-Sixth grade
09-Seventh grade
10-Eighth grade
11-Ninth grade
12-Tenth grade
13-Eleventh grade
14-Twelfth grade
15-High school diploma or equivalency
16-Post high school courses
17-Vocational training
18-Vocational Tech, 2 yr. certificate or equivalency
19-Associate of art degree
20-Sheltered workshop
21-Special education elementary
22-Special education secondary
23-Non-graded elementary
24-Non-graded secondary
25-Grade 13
26-Grade 14
27-Grade 15
28-Grade 16
29-Bachelor's Degree
30-Master's Degree
31-Doctor's Degree
32-Other service
33-No information available

Age
First two digits-years
Second two digits-months

Administered By

School Personnel
A-Teacher
B-Counselor
2
C-Administrator
D-Psychologist
E-Psychometrist
F-County School Official
G-State School Official
H-Social worker
I-Other

Non-School Personnel
J-Psychologist
K-Psychiatrist
L-Mental Health Worker
M-Guidance Clinic Personnel
N-Social Worker
O-State Employment Agency Personnel
P-Vocational Rehabilitation Personnel
R-Veterans Administration Personnel
S-Other

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
35	School Interest Inventory 1-Family Attitude (toward school) 2-Attitude of student (in general) 3-Teacher-Student Relationship Note: See narrative report portion relating to this item.	3	1,4	6 (Grades 7 & 9)	H*	150N	40,000 6,000,000
36	Ohio Vocational Interest Survey Interest Scales 1-With Data High 2 Average 1 Low 0 2-With People High 2 Average 1 Low 0 3-With Things High 2 Average 1 Low 0	1 and/or 3	1,4	6 (Grades 8 & 10)	H*	11N	40,000 440,000

DESCRIPTION OF THE OHIO VOCATIONAL INTEREST SURVEY SCALES

1-MANUAL-Routine work done by hand. No skilled use of tools. May involve routine feeding of materials into machines and routine use of some tools.

2-MACHINE WORK-Operation of machines to shape, cut or produce things. Involves precise adjustment of tools and machines. No machine repairing.

3-PERSONAL SERVICE-Routine service to people such as waiting, ushering, guarding, valet or messenger service.

4-CARE OF PEOPLE/ANIMALS-Looking after the ordinary needs of people or caring for, grooming, and exercising animals.

5-CLERICAL-Typing, recording, checking, filing, or performing general clerical or stenographic work.

6-INSPECTING AND TESTING-Inspecting, sorting, or measuring materials or products, or otherwise testing them for adherence to prescribed standards of quality, content, or performance.

7-CRAFTS AND PRECISION OPERATION-Skilled use of tools and equipment in the construction, installation, or repair of machines and appliances, the operation and maintenance of electronic equipment, or the practice of such skilled crafts as carpentry, plumbing, or bricklaying.

8-CUSTOMER SERVICE-Conducting business relations with people as in handling reservations, receiving payments, providing general information services and selling.

9-NURSING AND RELATED TECHNICAL-Providing nursing and such related services as physical therapy, operation of X-ray or medical laboratory equipment, or working as a medical assistant or dental hygienist.

10-SKILLED PERSONAL SERVICE-Providing skilled service to people such as tailoring, cooking, or cosmetology.

11-TRAINING-Instructing people in procedures, regulations, or skills related to employment or to recreational or hobby activities, or training animals for show or performance.

12-ABSTRACT-VERBAL-Preparing legal and business documents or technical reports; doing translating or creative writing or editing; or conducting and reporting research in the political, social, or psychological sciences.

13-ABSTRACT-NUMERICAL-Applying accounting, cost analysis, or statistical analysis methods to fiscal management, or performing research in such fields as mathematics, physics, or other sciences, using advanced mathematical and data-processing techniques.

14-APPRAISAL-Appraising and investigating work in such technical fields as surveying, mining, construction and merchandising; or applying engineering knowledge to the planning and carrying out of industrial processes and technical analyses.

15-AGRICULTURE-Producing farm, fish, garden, and forest products through the use of appropriate methods and processes.

16-APPLIED TECHNOLOGY-Applying engineering and research principles and knowledge to the design of structures and machines, the evaluation of technical processes and products, or the translation of ideas into working plans and specifications.

17-PROMOTION AND COMMUNICATION-Informing, persuading, or promoting ideas by performing such activities as news writing and editorial work: radio and TV announcing: legal work and contract negotiation: or gathering, analyzing and interpreting rules and regulations related to business or law.

18-MANAGEMENT AND SUPERVISION-Planning and directing the affairs of a manufacturing, commercial, government, or other organization, including the formulation and administration of policies and the supervision of workers.

19-ARTISTIC DECORATION-Interior decorating, display work, photography, commercial art work, or creative art work or artistic restoration.

20-SALES REPRESENTATIVE-Demonstrating and providing a technical explanation of products or services to customers, selling and installing such products or services, and providing related technical assistance.

21-MUSIC-Composing, arranging, conducting, playing, singing, or otherwise performing work involving musical composition or performance.

22-ENTERTAINMENT AND PERFORMING ARTS-Entertaining others through participation in dramatics, dancing, sports, or exhibitions before a live audience or TV or motion picture cameras.

23-EDUCATION AND SOCIAL SERVICE-Teaching in an elementary, secondary, collegiate, or specialized educational institution, or providing guidance, counseling, or welfare services to individuals or groups.

24-MEDICAL-Providing medical, surgical, and related services in the diagnosis, prevention, and treatment of human or animal diseases, disorders, or injuries.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
37	Type of Entry or Re-entry 0-Original Entry 1-Re-entry from within the same school (R1) 2-Re-entry from a public school in the same local administrative unit (R2) 3-Re-entry from a nonpublic school in the same local administrative unit (R3) 4-Re-entry from school in E. D. C. (R4) 5-Re-entry from a public school in the State, but outside E. D. C. (R5) 6-Re-entry from a nonpublic school in the State, but outside E. D. C. (R6) 7-Re-entry from another State or County (R7)	0	5	1	M	2N	200,000 400,000
38	Former Dropout 1-Yes 2-No	0	1, 3, 4, 5	1, 6	H	1N	200,000 200,000
39	Transaction Date 1-Entry 2-Withdrawal 3-Transfer (month/day/year)	0	10	2	M	14N	200,000 1,400,000
40	Number of School and District in which Currently Enrolled	0	5	1	H	4N	200,000 800,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
41	School from Which Incoming Pupil is Received 1-Coop Schools: name and district number 2-Non-coop Schools: name, city and state	0	4, 5	1	M	44N	200, 000 8, 800, 000
42	Grade Entered and Assigned--- Room/Homeroom (A/N) Grade 00-No formal education 01-Nursery or prekindergarten 02-Kindergarten 03-First grade 04-Second grade 05-Third grade 06-Fourth grade 07-Fifth grade 08-Sixth grade 09-Seventh grade 10-Eighth grade 11-Ninth grade 12-Tenth grade 13-Eleventh grade 14-Twelfth grade 15-High school diploma or equivalency 16-Post High school courses 17-Vocational training 18-Voc. Tech 2 yr. certificate or equivalency 19-Associate of Art Degree	0	5	4	M	6	200, 000 1, 200, 000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	20-Sheltered workshop 21-Special education, elementary 22-Special education, secondary 23-Non-graded elementary 24-Non-graded secondary 25-Grade 13, Freshmen College 26-Grade 14, Sophomore College 27-Grade 15, Junior College 28-Grade 16, Senior College 29-Bachelor's Degree 30-Master's Degree 31-Doctor's Degree 32-Other service 33-No information available						
43	% Enrolled Time in School 1-100% - 91% 2- 90% - 81% 3- 80% - 71% 4- 70% - 61% 5- 60% - 51% 6- 50% - 41% 7- 40% - 31% 8- 30% - 21% 9- 20% - 11% 0- 10% - 0%	0	5	1, 4	H	1N	200,000
44	Absence Per Attendance Period (Report on 1/2 day basis)	0	3/5	2	H	6N	200,000 600,000

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
45	Withdrawal (Withdrawal information is information about pupils who have withdrawn from membership in a class, grade, or school by transferring, completing schoolwork, dropping-out and because of death)	0	10	2	H	2N	100,000 200,000

Transfer (A pupil who leases one class, grade or school and moves to another class, grade, or school is referred to as a transfer).

01-Transfer to another grade or homeroom within the same school.
02-Transfer to another public school or other instruction under public school under the supervision of the same administrative unit.
03-Transfer to a nonpublic school located within the same local administrative unit.
04-Transfer to another school in E. D. C.
05-Transfer to a public school in the state, but outside the local administrative unit.
06-Transfer to a nonpublic school in the state, but outside the local administrative unit.
07-Transfer to another school, public or nonpublic, outside the state.
08-Transfer to another school, public or nonpublic, in another country.

Completion (A pupil who has graduated from a high school (grade 12) or junior college or otherwise has fulfilled the requirements for a prescribed program of studies is a completion).

09-Graduated from high school or junior college. (A pupil receives a diploma or degree as formal recognition for the successful completion of a high school or junior college program of instruction).

10-Completed other schoolwork. (A pupil who has completed school in an approved manner other than 08 and receives a certificate of completion, gains recognition for work as a high school post-graduate, is accepted for early admission to a college or university, or receives other recognition).

Non-completion

11-Dropout. (A dropout is a pupil who leaves school, for any reason except death, before graduation or completion of a program of studies and without transferring to another school).

12-Never belonged in school of record and assignment in file (error)

13-Death. (A pupil's name is removed from the rolls of the school because of his death).

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
46	Reasons for Withdrawal (Non-completion and/or Dropout)	3	3, 4, 5, 7	6	H	2N	50,000 100,000

01-Physical illness-A pupil leaves school because of physical illness.
02-Physical disability-A pupil who was excused from school attendance because of a physical defect or handicap of a permanent or semi-permanent nature.
03-Mental illness-A pupil who was excused or required to leave school because of a mental illness.
04-Mental disability-A pupil who was excused from school attendance because of a mental handicap or defect of a permanent or semi-permanent nature.
05-Behavioral difficulty-A pupil who was required to withdraw from school because of behavioral difficulty.
06-Academic difficulty-A pupil who leaves school because of academic difficulty.
07-Lack of appropriate curriculum-A pupil leaves school because the curriculum was not appropriate for his needs.
08-Poor pupil-staff relationship-A pupil leaves school because of poor relationships with members of the school staff.
09-Poor relationship with fellow pupils-A pupil leaves school because of poor relationships with fellow pupils.
10-Dislike of school experience-The pupil leaves school because of an active dislike of one or more aspects of his school experiences.
11-Parental influence-A pupil leaves school as a result of parental encouragement to do so.
12-Needed at home-A pupil leaves school to help with work at home.
13-Economic reasons-A pupil leaves school because of economic reasons, including inability to pay for school expenses and inability of parents to provide suitable clothing.

14-Employment-A pupil leaves school to seek or accept employment.
15-Marriage-A pupil leaves school to marry.
16-Pregnancy-A pupil leaves school, or is required to leave school, because of pregnancy.
17-New residence, school status unknown.
18-Entering military service.
19-Other known reason-A pupil leaves school or was required to leave to some reason
other than those given for above codes.
20-Reason unknown-A pupil leaves school for a reason which is not known.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
47	Descriptive Course Title	0	4, 5	3, 4	H	6N	H. S. 4, 500, 000 Elem. 10, 800, 000
	Course Code-6						
	High School 15 max. 1 yr. Elementary 12 max. 1 yr.						
48	Mark of Course Performance	1, 2	3	3	H	4A/N	H. S. 30, 000, 000 Elem 72, 000, 000
	Number or Letter Grade with plus or minus 4 x 15 x 10 4 x 12 x 10						
49	Credit Information	1, 2	4, 5	4	H	10N	H. S. 500, 000 Elem 1, 500, 000
	Amount of credit given						
	Credits attempted-5N Credits earned-5N						

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
50	Grade Points	1, 2	4, 5	4	H	6N	200,000 1,200,000

Assign any values, using numbers zero to nine.

(None: Thus, the mark of course performance could be qualified, using the same mark, by number of grade points assigned to it).

Example

Course A (accelerated-honors)	Course B (regular; average)	Course C (remedial; low)
Mark of A (assigned 5-9 pts.)	A (a lesser number)	A (least number)
Mark of B (assigned 4-7 pts.)	B (a lesser number)	B (least number)
etc.	etc.	etc.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
51	Class Rank	1, 2	4, 5	5	H	4N	200,000 9,600,000

4N x 12 grades x 200,000 pupils

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
52	GPA-Current and Cumulative	1, 2	4, 5	5	H	8N	200,000 1,600,000
53	Promotion or Non-Promotion	1, 2	3, 4, 5	5	M	1N	200,000

1-Promotion
2-Promotion other than regular
  (to provide for "age placement" or "social promotion" or "double promotion" or "promotion on trial")
3-Retained
4-Retention other than regular (to provide for "on-trial" etc.).

See bracketed notes opposite #2 and #4 above.

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
54	Academic Honors and Scholarships	0	4, 5	4, 5, 6	H	2N	200,000 2,000,000
	High School 2 x 5 Honors x 50,000 Elementary 2 x 5 Honors x 150,000						
	Honors 1-Honor roll by semester and year 2-Honorable mention by semester and year 3-Other academic honors by semester and year 4-Honors won (valedictorian, salutatorian, etc.) 5-National Honor Society by semester and year 6-Other						
	Scholarships 1-9---Code one through nine (name most popular) 0---O would be "other."						
55	Honor Roll	0	4, 5	3	H	16A	100,000 1,600,000
	8 periods/yr. x 2A						
56	School Activities (Co-Curricular)	0	10	4, 6	H	5N	50,000 H. S. 3,000,000 150,000 Elem. 4,500,000
	5 x 6 Activities x 2 terms (H. S.) 5 x 3 Activities x 2 terms (Elem.) Code Name - 2 Honors earned - 1 Year - 2						

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
57	Disciplinary Referrals Within School	1 and/or 3	3, 4, 5	5, 6	H	4N	200,000 800,000
	Frequency of referral/year 1-0 2-1-3 3-4-9 4-10 and over						
	Grade at time of referral 1 1 1 1 1 12						
58	Out-of-School Performance (Activity)	0	10	4, 6	H	5N	200,000 1,000,000
	Enter the name of the activity 2N						
	Honors 1-President 2-Vice-President 3-Secretary 4-Treasurer 5-Secretary/Treasurer						

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
	6-Sergeant at Arms 7-Historian 8-State Honors 9-National Honors 10-Other						
	Year Enter the last two digits of the year of the activity.						
59	Educational and Vocational Interests and Plans	0	1, 4	4, 6	H	10N	H. S. 50,000 500,000
	Information about the pupil's aspirations and plans for vocational training and/or education after leaving the school in which he is currently in membership.						
	Educational aspirations 01-Less than high school graduation 02-High school graduation 03-On-the-job training 04-Apprentice program 05-Go to the school in military service 06-Technical, trade or business school - 2 years or less 07-Technical, trade or business school - more than 2 years 08-Some college-not to graduate 09-Complete junior college 10-Bachelor's degree 11-Beyond a bachelor's degree 12-Other						

Year
Enter last two digits of year of selections

Vocational interests
0-No information available
1-Professional, Technical, and Managerial Occupations
2-Clerical and Sales Occupations
3-Service Occupations
4-Farming, Fishing, Forestry, and Related Occupations
5-Processing Occupations
6-Machine Trades Occupations
7-Bench Work Occupations
8-Structural Work Occupations
9-Miscellaneous Occupations

Item	Descritpion	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
60	Follow-Up on Continuing Education	0	10	6	M	3N	H. S. 50,000 150,000

Follow-up after high school graduation or withdrawal. Information concerning the mployment or other activities of a former pupil after he leaves a school.

Education
00-None
01-Less than high school graduation
02-High school graduation
03-On-the-job training
04-Apprentice program
05-Go to school in military service
06-Technical, trade, or business school-2 years or less
07-Technical, trade, or business school-more than 2 years
08-Some college-not to graduate
09-Complete junior college
10-Bachelor's degree
11-Beyond a bachelor's degree
12-Other

Employment
0-No information available
1-Professional, technical, and managerial occupations
2-Clerical and sales occupations
3-Service occupations
4-Farming, fishing, forestry, and related occupations
5-Processing occupations
6-Machine trades occupations
7-Bench work occupations
8-Structural work occupations
9-Miscellaneous occupations

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
61	Transportation, Tuition and Special Assistance Information	0	5, 6	5, 6	H	5N	200, 000 1, 000, 000

Transportation status of pupil-information about whether or not a pupil is transported to and/or from school or receives services in lieu of transportation, and at whose expense.

Transported
1-Yes
2-No

Whose expense
1-District only
2-Another district
3-State only
4-Private individual
5-District and state
6-Other, specify

Distance transported
(One way distance from school)
1-Less than 1 mile
2-More than 1 mile but less than 1-1/2 miles
3-More than 1-1/2 miles but less than 2 miles
4-More than 2 miles but less than 5 miles
5-More than 5 miles

Qualified for state aid

1-Yes
2-No

Services in lieu of transportation

1-Yes (specify) ____________________
2-No

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
62	Tuition Student	0	5,6	1,6	M	1N	200,000
	1-Yes 2-No						
63	Eligible for Federal Assistance	1,2	10	1,6	M	3N	200,000
							600,000

Information necessary to establish eligibility of the local school system to receive federal assistance.

400-Revenue from federal sources
  - 410-Vocational education
  - 411-Agriculture
  - 412-Distributive education
  - 413-Health occupation
  - 414-Home economics
  - 415-Office education
  - 416-Technical education
  - 417-Trades and industrial education
  - 418-Practical nurse training P. L. 84-911
  - 419-Area vocational education P. L. 85-864, Title VIII
  - 420-Vocational Education Act 1963 P. L. 88-210
  - 421-Manpower Development Training Act 1962 (Indian Vocational Training) P. L. 88-214
  - 422-Manpower Development Training Act 1962 (Training Programs) P. L. 89-15
  - 423-Public Health Training (Traineeship) P. L. 88-498
  - 424-Public Health Service Act (Nurses Training) Title VIII
  - 425-Welfare Education Program (ADC) P. L. 87-543
  - 426-Vocational Rehabilitation P. L. 66-236
  - 427-Social Security Amendments 1956 (Research and Demonstration Projects) P. L. 84-880
  - 428-Appalachian Regional Development Act 1965 P. L. 89-4

430-Educational Opportunity Act 1964 P. L. 88-452
    431-Title I B (Neighborhood Youth Corps)
    432-Title II A (Community Action Programs-Basic Adult Education)
    433-Title II A and III B (Special Poverty Programs)
440-Elementary and Secondary Education Act P.L. 89-10
    441-Title I (Educationally Deprived)
    442-Title II (Library)
    443-Title III (Supplementary Education)
    444-Title VI (Special Education)
450-National Defense Education Act P. L. 864
    451-Title III (Instruction)
    452-Title V (Guidance)
460-Miscellaneous
    461-Federal Forest Land
    462-Flood Control
    463-Grazing Land
    464-Johnson-O'Malley Act P. L. 73-167
    465-Adult Education (Indian Program) P. L. 67-85
    466-Mineral Leases
    467-National School Lunch Program
    468-School Milk Program
    469-Construction/Federally Impacted Area P. L. 81-815
    470-Maintenance and Operation/Federally Impacted Areas P. L. 81-874
    471-Assistance for Public Schools Affected by Major Disasters P. L. 80-313
    472-Immigration and Nationality Act P. L. 83-414
    473-Juvenile Delinquency and Youth Offenses Control Act of 1961 P. L. 87-274
    474-Migrant Health Act 1962 P. L. 87-692
    475-Vaccination Assistance Act 1962 P. L. 87-868
    476-Educational Television Broadcasting Facilities P. L. 87-447
    477-Library Service and Construction P. L. 88-269
    478-Title II Civil Rights Act 1964 P. L. 88-352
    479-Title IV Civil Rights Act 1964 P. L. 88-352
480-Teaching Materials for the Blind 20 USC 101-105
    481-Research and Demonstration Projects in Education of the Handicapped P. L. 88-164
    482-Area Redevelopment Act. P. L. 87-27
    483-Civil Defense Adult Education

490-Other
491-Federal Reimbursement

Item	Description	Accessibility	Source	Frequency of Input	Priority of Inclusion	Char	Volume
64	Eligibile for Welfare Information as to whether a pupil is receiving a portion of his support via some welfare program. 0-None 1-No information available 2-Local government 3-County government 4-State government 5-Federal government 6-Private institution 7-Private individual 8-Other, specify	1,2	10	1,6	H	1N	200,000
65	Professional Opinion of Educational Level Attainment 1-Elementary Teacher 2-Secondary Teacher 3-Counselor 4-Administrator 1-Dropout prior to high school 2-Dropout during high school 3-Terminate formal education at grade 12 4-Continue education beyond grade 12. Date (year only)	3	3,4,5	5,6	H	4N	200,000 800,000

VI. PUPIL REQUIREMENTS FILE IMPLEMENTATION

In devising the content of the Pupil Requirements File, and in specifying data elements for inclusion, the consulting team has sought to suggest establishment of operational machines to achieve maximum results relating to these purposes:

(1) To predict to the appropriate authorities the approximate percentages of students who would not complete their high school work (group predictions).

(2) To predict to the appropriate authorities which students would not complete their high school work (individual predictions).

(3) To predict to the appropriate authorities the approximate percentage of high school graduates who would terminate their formal studies at the time of graduation (group predictions).

(4) To aid the proper authorities by predicting which students in the high school would not continue past the 12th grade (individual predictions).

(5) To establish the types of occupational directions past groups of dropouts and terminal students have followed; and attempt, in the future, to direct them into, and prepare them for, the most useful type of occupations.

(6) To aid school counselors through the five above items in guiding the right students into these district-provided vocational programs.

Operational Models for Identifying Potential School Leavers

The following materials are directed toward consideration of items one and two of the five basic purposes.

The usual method for identifying potential school leavers consists in reviewing cumulative and guidance records and applying criteria such as those listed in the review of literature. Teachers, counselors, and administrators all have been asked to identify students whom they believe will leave school. Unfortunately, this system has more often than not been impractical for three major reasons:

(1) If more than a few of the characteristics identified in the literature are to be considered and looked for by the teacher and/or counselor, the "system" becomes too unwieldy for ready use in the school.

(2) There is no single characteristic or pattern of characteristics which will identify all potential school leavers.

(3) Few school record systems contain sufficient data and/or have it readily obtainable.

For the above reasons, the development of a regional data bank containing agreed upon pertinent and desirable information seems most important. The degree of depth and detail included in the information system is one of local choice; limits need to be flexible in order most effectively to serve the wide range of user needs. The following review of three possible and practical identification models serves only to illustrate the kinds of data which might at least be considered for inclusion in any student data system which is to be used to identify potential dropouts and/or terminal students.

Model I: A minimum but highly effective identification model could include but a single datum: the score a student obtains on the School Interest Inventory is a commercial 150-item, self-report inventory designed to be used in the early detection of potential dropouts and is item 35 of the data file. Discriminating items parallel the background, experiences, characteristics, and attitudes most generally agreed upon in the literature typical of school leavers. The student is asked to answer "True" or "False" to items such as these:

> Our family does very little together that is fun.
>
> School is fun.
>
> I would rather have a job than go to school.
>
> I have never failed to move with my class to the next grade.
>
> The teachers in our school do not seem to understand me.

The inventory is available in a booklet which contains both inventory questions and response positions. Each booklet serves all grades, 7-12, and may be scored either by machine (MRC) or by hand.

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[10] William C. Cottle, School Interest Inventory (Boston: Houghton Mifflin Company, 1966).

Model II: A more extensive model stems from a study designed to investigate whether there are early predictive factors which differentiate the potential dropout from those who graduate. Dudley reports a study which focuses on factors which easily are accessible in cumulative records, that are available in the school records during the first few years the child is in school, and which differentiate the potential dropout from the potential graduate.[11] Seven factors statistically differentiated the dropout from his graduate peer. These factors are:

(1) father's primary occupation
(2) mother's educational attainment
(3) student acceptance by other students (peers)
(4) rank in class
(5) number of grade retentions
(6) number of transfers to different schools
(7) number of siblings.

These factors can be and have been used as a "predictive scale" to identify dropout proneness in children and are items or contained within items 16, 20, 46, 51, 53, 39, and 24 respectively in the data file.

Model III: This model is very similar to that suggested in Model II above but is designed to identify potential high school dropouts. Lacy reviewed the literature on the high school dropout and created a scale to identify the potential dropout using information readily available from most school record systems.[12] His main source of information is the cumulative record of each student. The practical scale he developed includes the following factors:

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[11] Gerald O. Dudley, "A prescription for Locating School Dropouts in the Early School Years," *Indiana Personnel and Guidance Journal*, 2 (1968), pp. 67-73.

(1) sex
(2) attendance
(3) school marks
(4) scholastic aptitude (IQ)
(5) reading ability
(6) over-age for grade
(7) course of study.

The above factors consitute the Dropout Scale; points are assigned to factors and a total score is used to identify the potential dropout. In the data file, these factors are items or contained in items 4, 46, 48, 34, 35, 53, and 47 respectively.

The identification models outlined above are examples of possible procedures to identify both individuals and groups of individuals who are to be considered potential school leavers. A given school or school district or the EDC itself could use any or all of these models to approximate the percentages of students as well as the individuals who will not complete their high school work. Each model has already demonstrated its practical usefulness in the

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[12] Charles L. Lacy, "Identifying Potential High School Dropouts," *School Counselor,* *16* (1968), pp. 36-40.

school setting. However, it must be remembered that there are many variations and many combinations of variables available, and that the details of each identification system will differ. *Individual schools and school districts will need to develop models which are meaningful for them as there is no single scale, pattern, or procedure which will work in all settings.*

Terminal Education After High School Graduation

The purpose of this section is to describe the kinds of data that will assist in determining the proportion of students who will terminate formal education after graduation and, in addition, assist in identifying individual students who will not pursue formal education beyond high school graduation, these two aspects being items three and four of the five basic purposes.

A review of literature regarding identifying characteristics of dropouts produced a long list of factors that researchers have shown to be useful in distinguishing students who drop out of school from those who complete high school. Many of the same characteristics are significant in determining who among those who complete high school are least likely to continue formal studies beyond that point in an educational career. Although it generally is agreed that no single image adequately characterizes either the dropout or the terminal student, researchers have identified constants in the school environment which tend to collectively provide predictability. A listing of such constants includes the following: The second number in parenthesis pertains to the element number in the data file providing the type of information indicated.

(1) scholastic aptitude (34)

(2) reading ability (34)

(3) interests (36)

(4) attitudes (35)

(5) student activities (56)

(6) socio-economic information (15, 16)

(7) sex (4)

(8) race (2)

(9) age (5)

(10) language spoken in the home (9)

(11) information about the home

  (a) sex of primary head of household (11)

  (b) relationship of primary head of household (13, 14)

  (c) educational level of heads of household (15, 20)

  (d) occupation of head(s) of household (16, 21)

  (e) size of family (24)

  (f) attitude of head(s) of household regarding education (n/a)

(12) school attendance information (44)

(13) transfer and withdrawal information (45)

(14) school marks (52)

(15) course of study (53)

(16) activities outside of school (58)

(17) disciplinary referrals (in and out of school) (57).

It is clear from the literature that no single combination of data elements or prediction model can be considered as all-inclusive for predicting dropout and high school terminal student phenomena. *A more defensible approach appears to be a model for any given school district based on a set of assumptions which accurately describes the unique factors characteristic to that particular district.* Once the model is established and becomes operative in identifying by groups those who will terminate formal education after high school, individuals may be identified by the same components which have identified them as a group.

Occupational Directions, Past and Future

The last of the basic five purposes was two-pronged in design. The first aspect was to indicate how information might be secured on the types of occupational directions that past groups of dropouts and terminal students have followed. Having reached this determination, the second aspect was to attempt to identify portions of the pupil personnel data system which in the future would assist in the direction of such students into effective preparation programs for useful occupations.

Current information on the types of occupational patterns which dropout and terminal students have followed in the past is exiguous at best. However, one promising recent source of pertinent information is contained in a study conducted in 1968 by the Social, Educational Research and Development Corporation of Chicago, Illinois, for the Educational Development Cooperative.

It is suggested that apart from the proposed data file that a complete analysis of data secured from item seven of the Former Student Questionnaire of the above mentioned study should be made bythe participating members of the Educational Development Cooperative in anticipation that viable information will accrue. Longitudinal data might be secured and categorized on an annual basis beginning with the year 1961 through 1968. Job titles should suggest types of occupations initially entered, tenure in various positions, and typical progression patterns over a period of eight years. For example, a relatively high percentage of female students dropping out of school before graduating or terminating their formal education at grade twelve in the early 1960's went into clerical and sales careers. Now, however, a much smaller percentage of these people may be expected to enter the job world in clerical and sales positions.

Two other mechanisms which could be utilized to acquire information on dropout and terminal student groups are (1) the conduct of surveys at the local school district level, and (2) collection of similar/on-going data by the Educational Development Cooperative. In the former, each school could examine historically the occupational patterns of their former and/or re-entering students who fall into the two groups in question. Such information then could be pooled and analyzed by a central agency such as the Educational Development Cooperative. Overall patterns and trends which might emerge could be interpreted and results disseminated to the participating school districts. Having achieved such data historically, then a system of annual updating, dovetailed into the data bank, could be established which would build on the foundational occupational patterns. This would create a malleable system to incorporate new data which would reflect current and emergent trends. The next section suggests items in the Pupil Requirements File which might be considered in such a system.

From the Pupil Requirements File three basic informational categories may be utilized to pool data to predict occupational directions of the student(s). The categories are: status of the student, demographic data regarding the student, and vocational interests and abilities of the student. In relation to the status, one single item, number 45, will suffice. The item designated "Withdrawal" should be used with the student being sub-classified as one of the following: 09, graduated from high school or junior college; 10, completed other school work or 11, dropout.

Six items are suggested as being equiponderant demographic type data regarding the student(s). The first two are personal identification by name, item one, and by sex, item four. The other four items - 25, 26, 27 and 28 - yield information relating to physical conditions of vision, hearing, speech, and impairment.

However, the most significant category relates to the vocational interests and abilities of the student(s). Again a selection of six items from the Pupil Requirements File is suggested as being of most importance in the determination of the vocational interest and ability patterns of the student. Items 34, 35, and 36 form the first grouping of items. It is important from item 34 (standardized tests and inventories) to garner an overall picture of subject achievement and aptitude levels of the student. Nevertheless, highest priority must be assigned to items 35 and 36. In the former, a measure of school interest is obtained while vocational interests may be gleaned from the results of the latter item. The other three items are data item numbers 42, 46, and 59. In order, they yield information relating to (1) grade entered and assignment, (2) reasons for withdrawal, if the student is classified as a dropout or a non-completion one, and (3) further indications of educational and vocational interests, as well as an indication of the educational and vocational intentions of the student which is of great consequence at this point.

The three suggested approaches for securing the needed information are deemed to be feasible particularly when linked with the utilization of the data from the thirteen items identified in the Pupil Requirements File. Such a process should be a viable one in the attempt of educators in the participating Educational Development Cooperative school districts to prepare and direct students into types of occupations most appropriate for them.

In summary, it is suggested that the establishment of operational machinery on one of two bases, system specific, or clusters of school systems for attainment of the five basic purposes will maximize the satisfaction of the sixth basic purpose--that of aiding school counselors to guide the students into district-provided vocational programs.

VII. SUMMARY

The material in the preceding pages has been focused on the establishment of an area-wide data bank of pupil personnel information. The consultants have directed their attention to defining topics or data elements to be included in a pupil requirements file in order to facilitate the work of appropriate authorities in developing individual and group predictions regarding dropout and terminal high school students. Attention also was directed toward inclusion in the data bank of those elements that would establish occupational directions of students as well as provide usable information for school counselors in guiding students into district-provided vocational programs.

In preparing this report, the consultants have addressed themselves to the basic question: What data should be collected and maintained into an updatable data bank? In order to accomplish this task, varied procedures were followed. Library research was combined with on-site school visitations and conversations with administrators, counselors, teachers, and students. A series of meetings was held in the area with school personnel and the consulting team met with resource persons and known leaders to secure the benefit of their expertise. The result of these procedures has been to implement through Benjamin C. Willis Educational Services, Incorporated, a Pupil Requirements File with operational procedures whereby the file can be initiated, continuously updated, and of value to the individual school districts participating in the proposed pupil personnel data bank operations.

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